

SEQUENCE LISTING

<110> BRIGGS, MICHAEL R.  
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AUWERX, JOHAN  
FAJAS, LLUIS

<120> HUMAN PEROXISOME PROLIFERATOR ACTIVATED RECEPTOR GAMMA  
(PPAR $\gamma$ ) GENE REGULATORY SEQUENCES AND USES THEREFOR

<130> 234/231

<140> TO BE ASSIGNED  
<141> FILED HERewith

<150> PCT/US98/15411  
<151> 1998-07-24

<150> US 60/053,692  
<151> 1997-07-25

<160> 60

<170> FastSEQ for Windows Version 3.0

<210> 1  
<211> 503  
<212> DNA  
<213> Human PPAR $\gamma$ 1 proximal promoter, exon A1, and intron A1  
<400> 1

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| ccccctgccc | tgccccctgcc | cccacccccca | ccccaccccc | cacccccagc | cggcgcgccgc | 60  |
| gccccgcccc | gcgcggggcc  | cggtctggcc  | cgaccgcgtt | cgccgcggg  | caggcggggc  | 120 |
| ccagcgact  | cggagcccga  | gcccagagccg | cagccgcgc  | ctggggcgct | tgggtcgcc   | 180 |
| tgcaggacac | cggagagggg  | cgccacgcgc  | ccgtggccgc | aggtcagagt | acgggtgccc  | 240 |
| gcggcgctcg | ggaaccggct  | gctgcctggg  | cggggagtgc | tcaggagggg | ggcgcggagg  | 300 |
| gctggggccg | aggtctggg   | gggtagggcc  | gaggaaacgg | caactgacgg | ggtcccagac  | 360 |
| ggatgagagc | tggggagaag  | gggtctcgg   | ctgaggggtc | cggggctgag | gcacgggtcat | 420 |
| ggtccggcag | gacccggact  | gacgggtctc  | gggcggggcg | ctcacgggtg | accgggtgaa  | 480 |
| tgggtctcgg | gctgacggca  | ccc         |            |            |             | 503 |

<210> 2  
<211> 2688  
<212> DNA  
<213> Human PPAR $\gamma$ 1 promoter

&lt;400&gt; 2

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| ggagctccac | gcggtggcgg  | ccgctctaga | actagtggat  | ccccgggct   | gcaggaattc  | 60   |
| gaggctgcag | tgaactatga  | ttgcaccact | gcactccagc  | ctgggtgaga  | gagcaatacc  | 120  |
| ttgtctcaaa | acaaacaaac  | aaacaaaacc | ccatgagata  | tcacttcata  | ccctttaggt  | 180  |
| tggctaaaat | aaaaaagact  | ataacaagtg | ttgacaagga  | tgtggaaaaa  | ctggaaccct  | 240  |
| gacacattgc | tgggtgggatt | gtaaaatggg | gtgccactt   | tggaaaacag  | actggcagtt  | 300  |
| cctcaaaaac | accgagttac  | gttatgatcc | tgcagttctg  | tccctaggta  | tatactcaag  | 360  |
| agaaataaaa | atatatgtcc  | acaagtaacc | ttgtacatga  | atgctcacag  | cagcattatt  | 420  |
| cataatagcc | cataaaagta  | gaaacaacct | aaatattcat  | caattcatgg  | gatgaataaa  | 480  |
| caaatgtgg  | tatatgtgta  | taatggaata | ttgaccataa  | aaaggaatga  | aatattaata  | 540  |
| taagctataa | catggatgag  | cctccacaaa | tactatgcta  | agtgaagaa   | gaaagtcaca  | 600  |
| aaggacttca | tattctatga  | ttctatttat | atgaattgtc  | cagaataggt  | aaatctatag  | 660  |
| agaaagaata | tctctatcta  | gagttgggtg | aatgactgtt  | aatggagagg  | gggttccttt  | 720  |
| ttggagtgat | gaaaatgttc  | taagggtaga | tttgggtgat  | atggcacaac  | tctgtcaata  | 780  |
| aactaaaact | cattgaactg  | tacattttat | ttattttatt  | ttgagatgga  | gtcttgctct  | 840  |
| ggggctgaag | tgcagtggcg  | caatctcggc | ttgtaacctc  | tgctctccag  | ggtcaagcga  | 900  |
| ttctactgcc | tcagccccc   | gagtagctga | gattacaggc  | acgtgccacc  | acgccagct   | 960  |
| aatttttgta | tttcttagta  | gagatggagt | ttcaccatgt  | tggccaggct  | ggtcttgaac  | 1020 |
| tcccggcctc | aagtgatcca  | cctgcctcgg | cctcccaaag  | tgctgggatt  | acaggcgtga  | 1080 |
| gctgccatac | ccggcctgaa  | ttgtacattt | tacttctatg  | gtattttacat | tttagattat  | 1140 |
| attaattatt | cctcaataaa  | gctgtgattt | taaaaagcag  | gctaggcgca  | gtggctgggtg | 1200 |
| cctataatcc | cagcactttg  | gaaagctgag | gcaggaggat  | cacttgagcc  | caggagtttc  | 1260 |
| agactagtct | aggcaacatg  | tcaagacaca | gtctctacta  | aacaattaaa  | attaaaaaaa  | 1320 |
| aaaattagcc | aggcatgggtg | gtgtgcacct | gtagtcccag  | ctacttggga  | gcctgggggtg | 1380 |
| ggaggattcc | ttgagcccgg  | gaagtcgagg | ctgaagtgag  | ccgtgattgc  | gccacagcac  | 1440 |
| tccagcctgg | gcgacacagc  | aacaccctgt | ctcatggaag  | aaagaaagaa  | aagaaaggaa  | 1500 |
| gaaagaaaaa | aaaaaagcag  | attggaactc | tggaaattaac | aagaagtagg  | acgcacggag  | 1560 |
| cacttccgcc | tgagtggaga  | ctgtggatcc | gggtcaacct  | gactacctaa  | atcacaggcc  | 1620 |
| aataaatggt | ctttcagtg   | tcagtccctg | taagatccgt  | ggctctcagc  | ttcttatctt  | 1680 |
| aggggctgtg | gaggaaggac  | atgattatgt | tgatttaagc  | gctgaatatt  | ttcccttggtg | 1740 |
| atacccatcc | tcgcaaaact  | ttgcttcaac | cacaaacgag  | gaccttctgt  | accagagggg  | 1800 |
| caataacaca | atgaagctag  | gaagaaatgc | agagcacccc  | agcatacagt  | ccataagctt  | 1860 |
| cctgaagtgg | ggggcctcag  | gcctcgctgc | ctcccaaaag  | aggatcaggc  | ccagaacagt  | 1920 |
| atgctccaga | aataagactg  | gaaaaaggga | aagaggggcc  | tcaagtccag  | gagaccagcg  | 1980 |
| gctttctgaa | cgcgcacctg  | ccaaccctct | ttggacaggt  | cacgatggac  | agcgtggcag  | 2040 |
| gaaaagaaaa | ggtcactgtc  | tacccaacac | atgagaaact  | gtttctcgtg  | cctcacgtcc  | 2100 |
| ccactccgtc | cccacccatg  | ttgtctgagt | ccctcgggtg  | cagaaacact  | gctaagaaat  | 2160 |
| ttaagaaatt | ctgttaatga  | gtttaagaaa | tgtttttaat  | gattaaaagt  | cagtgacttg  | 2220 |
| tgaataacca | tgtaacttac  | aaacgcaagg | aactctgaaa  | gtgtgcagca  | ccaccgatca  | 2280 |
| gaagagaaaa | ccaagggacc  | cgaaatatgc | tttaattaaa  | ttttctttta  | aaatgtcact  | 2340 |
| ggaaagaaca | tcttgggaag  | acggcctggc | cgatcgccgt  | gtgaagggca  | agccactctg  | 2400 |
| gccgagaggg | agccccacac  | ctcgggtctc | ccagaccggc  | cctggccggg  | ggcatcccc   | 2460 |
| taaacttcgg | atccctcctc  | ggaaatggga | ccctctctgg  | gccgcctccc  | agcggtggtg  | 2520 |
| gcgaggagca | aacgacacca  | ggtagctgcc | gcggggcaga  | gagtggacgc  | gggaaagccg  | 2580 |
| gtggctccc  | ccgtgggccc  | tactgtgcgc | ggggggcggc  | cgagcccggg  | ccgctccctc  | 2640 |
| ccagtcgcgc | gccgcgcgcc  | gcgcctgtt  | tgggttcattg | gggggggtg   |             | 2688 |

&lt;210&gt; 3

&lt;211&gt; 2045

&lt;212&gt; DNA

<213> Human PPAR $\gamma$ 2 promoter, exon B, and intron B

&lt;400&gt; 3

|             |             |            |            |             |             |      |
|-------------|-------------|------------|------------|-------------|-------------|------|
| gaattcaact  | gaatatagag  | aaaactaatt | ttacacaact | gtaatcactg  | tagtcatttg  | 60   |
| gacaaattag  | caaaccceaag | ttttgcttta | acttggattg | ccttaataaaa | gatgttttgg  | 120  |
| ggcttaattg  | cacagttgct  | caactcccc  | actttattcc | gtgatgttca  | gacccagcca  | 180  |
| gcatttcccc  | atcaggctct  | tgcaccatga | ttgacaggga | cacttttact  | agtcccttg   | 240  |
| aagaatgaat  | agttactcaa  | tggagattaa | ccagatatat | atttatttta  | ctcagaatat  | 300  |
| cacgataagt  | ataattcaga  | gaattattgc | cttctaatat | actgccctgt  | gtgggggctg  | 360  |
| ctttgaaagt  | ccgcaaagtc  | actgcaattc | taataggcca | ctcatgtgac  | aagacctgct  | 420  |
| cccacatcgg  | taatttggea  | cagctagtat | ttctccttgc | caaaaagggc  | aaaggccttg  | 480  |
| agcaagaagc  | cagctttttc  | ctgattacaa | aactgaccac | aattcctcgc  | caacctaaaca | 540  |
| gcgtaagtct  | atTTTTTct   | ggtggtgtgt | tattcttctc | atagagaact  | ccattttttc  | 600  |
| attatgacat  | agcacttatc  | gtttaaacat | caattgatgt | tcaaacaatca | gctggtgtaa  | 660  |
| cattgctgca  | gttgctattg  | atggataagc | tgaagttttt | aagaaagcaa  | acccgatgta  | 720  |
| taaaattgaa  | accagatcaa  | acccttcttc | attctcagct | atttaatttt  | acagaattta  | 780  |
| gatagcagtc  | agtatcattt  | tgggcttcac | aatcagtag  | agtaagtacc  | ttaggaatat  | 840  |
| aacattttcag | tagcatgctg  | ataccaacgt | ttaaactatg | gatacatatt  | tgaattccaa  | 900  |
| atTTTTcttc  | agataatgtg  | attagagatt | agagattcaa | ccagggatag  | acaccgaaag  | 960  |
| aaaactttgc  | ccaaataagc  | tttctggtat | ttcataagca | agagatttaa  | gttttccatt  | 1020 |
| taagaagcca  | ttgtgaatta  | tacaacaata | aaaaatgcaa | gtggatattg  | aacagtctct  | 1080 |
| tctctgataa  | ttctaaatac  | agtacagttc | acgcccctca | cgagacactg  | aacatgtggg  | 1140 |
| caccggcgag  | acagtgtggc  | aatattatcc | ctgtaatgta | ccaagtcttg  | ccagagcagt  | 1200 |
| gaacattatg  | acacaacttt  | ttgtcacagc | tggctcctaa | taggacagtg  | ccagccaatt  | 1260 |
| caagcccagt  | cctttctgtg  | tttattccca | tctctcccaa | atatttggaa  | actgatgtct  | 1320 |
| tgaactcatg  | gtgtattcac  | gattctgtta | cttcaagtct | ttttctttta  | acggattgat  | 1380 |
| cttttgctag  | atagagacaa  | aatatcagtg | tgaattacag | caaaccata   | ttccatgctg  | 1440 |
| ttatgggtga  | aactctggga  | gattctccta | ttgaccaga  | aagcgattcc  | ttcactgata  | 1500 |
| cactgtctgc  | aaacatatca  | caaggtaaag | ttccttccag | atacggctat  | tggggacgtg  | 1560 |
| ggggcattta  | tgtaagggtg  | aaattgctct | tgtagtttgt | cttccagggt  | gtgtttgttt  | 1620 |
| taatactatc  | atgtgtacac  | tccagtattt | taatgcttag | ctcgttgcta  | tcgcgttcat  | 1680 |
| ttaaaaacat  | gttcagaacc  | ttaaaaaagg | aaacctaacc | taatctatct  | tatctctgtg  | 1740 |
| catggctccc  | atttcttgaa  | ttttaagcat | taaaggata  | gttatatcca  | aaaacaatcc  | 1800 |
| tggtcatctt  | tatttctctga | gtttgcatag | atttcccaag | aatacataat  | ggcttttttag | 1860 |
| acttgaagg   | tcacttttcc  | tctttcatct | catatgttag | agatctctca  | taactgtgtt  | 1920 |
| atccctcttg  | cagcactttt  | attcctcttg | aatacctcag | ctcttttctg  | ttctattttg  | 1980 |
| aaatctaagt  | atgtgtgtgc  | acttcagctc | tcccaaagaa | tgtatatccc  | acaatgtagg  | 2040 |
| acaag       |             |            |            |             |             | 2045 |

&lt;210&gt; 4

&lt;211&gt; 27

&lt;212&gt; DNA

&lt;213&gt; LF-2

&lt;400&gt; 4

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27

&lt;210&gt; 5

&lt;211&gt; 27

&lt;212&gt; DNA

&lt;213&gt; LF-14

&lt;400&gt; 5

agtgaaggaa tcgctttctg ggtcaat

27

&lt;210&gt; 6

&lt;211&gt; 27

&lt;212&gt; DNA

&lt;213&gt; LF-18

&lt;400&gt; 6

agctgatccc aaagttggtg ggccaga

27

&lt;210&gt; 7

&lt;211&gt; 30

&lt;212&gt; DNA

&lt;213&gt; LF-20

&lt;400&gt; 7

cattccattc acaagaacag atccagtgg

30

&lt;210&gt; 8

&lt;211&gt; 30

&lt;212&gt; DNA

&lt;213&gt; LF-21

&lt;400&gt; 8

ggctcttcat gaggcttatt gtagagctga

30

&lt;210&gt; 9

&lt;211&gt; 29

&lt;212&gt; DNA

&lt;213&gt; LF-22

&lt;400&gt; 9

gcaattgaat gtcgtgtctg tggagataa

29

&lt;210&gt; 10

&lt;211&gt; 29

&lt;212&gt; DNA

&lt;213&gt; LF-23

&lt;400&gt; 10

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29

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<213> LF-24

<400> 11

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<210> 12  
<211> 29  
<212> DNA  
<213> LF-25

<400> 12

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29

<210> 13  
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<212> DNA  
<213> LF-26

<400> 13

acataaagtc cttcccgtg accaaagcaa

30

<210> 14  
<211> 29  
<212> DNA  
<213> LF-27

<400> 14

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29

<210> 15  
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<212> DNA  
<213> LF-28

<400> 15

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29

<210> 16  
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<212> DNA  
<213> LF-29

<400> 16

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29

<210> 17  
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<213> LF-33

<400> 17

gacgggctga ggagaagtca cactctga

28

<210> 18  
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<213> LF-35

<400> 18

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28

<210> 19  
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<213> LF-36

<400> 19

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24

<210> 20  
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24

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24

<210> 22

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<213> LF-59

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24

<210> 23

<211> 24

<212> DNA

<213> LF-60

<400> 23

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24

<210> 24

<211> 26

<212> DNA

<213> AII J PPRE

<400> 24

gatccttcaa cctttaccct ggtaga

26

<210> 25

<211> 30

<212> DNA

<213> ACO PPRE

<400> 25

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<210> 26

<211> 27

<212> DNA

<213> LPL PPRE

<400> 26

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27

<210> 27

<211> 19

<212> DNA

<213>  $\gamma$  AS

<400> 27

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19

<210> 28

<211> 20

<212> DNA

<213>  $\gamma$ S

<400> 28

tctctccgta atggaagacc

20

<210> 29

<211> 19

<212> DNA

<213>  $\gamma$ 2S

<400> 29

gcgattcctt cactgatac

19

<210> 30

<211> 52

<212> DNA

<213> Oligonucleotide

<220>

<223> "n" stands for a, g, c or t.

"v" stands for a, g or c.

<400> 30

ttctagaatt cagcggccgc tttttttttt tttttttttt tttttttttt vn

52

<210> 31

<211> 201

<212> DNA

<213> PPAR $\gamma$ 1 proximal promoter

SD-143565.1



&lt;400&gt; 31

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ccgaccggga tccgcgcgcg cgggcaggcg gggcccagcg cactcggagc ccgagcccga    120
gccgcagccg ccgcctgggg cgcttgggtc ggcctcgagg acaccggaga ggggcgccac    180
gccgccgtgg ccgcagaaat g                                201

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&lt;210&gt; 32

&lt;211&gt; 177

&lt;212&gt; DNA

<213> PPAR $\gamma$ 2 proximal promoter

&lt;400&gt; 32

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gtcctttctg tgtttattcc catctctccc aaatatttgg aaactgatgt cttgactcat    60
gggtgtattc acgattctgt tacttcaagt ctttttcttt taacggattg atcttttgtg    120
agatagagac aaaatatcag tgtgaattac agcaaacca tattccatgc tgttatg      177

```

&lt;210&gt; 33

&lt;211&gt; 468

&lt;212&gt; DNA

<213> PPAR $\gamma$ 3 proximal promoter

&lt;400&gt; 33

```

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tgtgacataa aagatggaaa ggggcttcat tcatgttagt gatggaaata ggaaagtagg    120
tgaagtgatt ttaatagatg tttcttttat gaaataattt ttaaagattg tccagccctg    180
catgatttat gatgaatcat tttgtggtct gttagttagt tttagagaat agaaagcatt    240
gtaggctcag ggaaagcaaa cattcagaat gaaatccaat agagaaggta aatttatttg    300
ggcatgtaca ttttggcagc ctaggctgtg tacatgtgta cacattctga acatgtgtgt    360
atattgaaaa tcttgtctct tttttattgt taagatttga aagaagccga cactaaacca    420
ccaatataca acaaggccat tttgtcaaac gagagtcagc cttaacg                468

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&lt;210&gt; 34

&lt;211&gt; 1463

&lt;212&gt; DNA

<213> PPAR $\gamma$ 3 promoter, exon A2, and intron A2

&lt;400&gt; 34

```

gagaatacag gcacatgcca ccatgccag ctaatttttc tgttttttgt agagacagga    60
tttcgctgtg gtgctcaggc tggctctccaa ctctgggct caagcaatcc gcctgcctca    120
gccttccaaa gtgaaaagg tttctctcat ttttcaaata gaagtactaa acaatgccag    180
agaaataaat aaacaggcaa aatacgtttg ctatagttta tattatttcc tgctacagtt    240
aacaaaatgg gaagacattt tatcttcatg gtctactaca tttatgccat gtgttaagta    300
ataaaatagc ttttgtaaat tataaattaa aaggtacaga tttaaaagag aaaatactgt    360
agagttttca tgtaggtaag actgtgtaga atgtcgggtc tcgatgttgg cgctattcaa    420
gccctgatga taaggctttt ggcattagat gctgttttgt cttcatggaa aatacagcta    480

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ttctaggatc cttgagcctt tcataagaga taagggtgtg aatcctaaga ccctaggacc 540
atttacttag atgatctgct ctctggttcg tcctctgaaa agtctgcttc gtgaggggtg 600
tgctgcattt gccttgcccta agtggtgtgg cacacaactg tactgtcacc ttaggcttaa 660
taaccatgtg tcatctagaa tgaagttata ttttaaaaag gatcgttttt gccatgtata 720
aattttcaaa cattaacttt cagggttatt aatcctttta aggtctagtt tttcttaagt 780
ctgtgcagta atagaggtat cgtcattcat gtgacataaa agatggaaag gggcttcatt 840
catgttagtg atggaaatag gaaagtaggt gaagtgattt taatagatgt ttcttttatg 900
aaataatttt taaaagattg tccagccctg catgatttat gatgaatcat tttgtggtct 960
gttagttact tttagagaat agaaagcatt gtaggctcag ggaaagcaaa cattcagaat 1020
gaaatccaat agagaaggta aatttatttg ggcattgtaca ttttggcagc ctaggctgtg 1080
tacatgtgta cacattctga acatgtgtgt atattgaaaa tcttgtctct tttttattgt 1140
taagatttga aagaagccga cactaaacca ccaatataca acaaggccat tttctcaaac 1200
gagagtcagc ctttaacggt aagtaaaatc agaattttata ctgcatttgt attgaaaagt 1260
atccctttta aagaatatgt aaattataca ttgttatttt attgtaaaat ttcctagaga 1320
gtgatttttg actattataa tactttctgc tatataattt tccagtcagt tggactatgc 1380
agtgtaacat atttgtctaa cacaaaacaa aggtaagata ggaaaatgac ctagaagttg 1440
agaaataact caaatcctta aaa 1463

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&lt;210&gt; 35

&lt;211&gt; 695

&lt;212&gt; DNA

&lt;213&gt; Intron B, exon 1, and intron 1

&lt;400&gt; 35

```

ctgggataac aggtgtgagc cactgtgcct ggctgtata ctataagttt aaaatttttg 60
tctattatac tcaataaagc tggacaaaat tttaaataaa taacagcagt cataacaga 120
ctcaattgat gacctaattg agaagttaat gagagcaggc ctggtggcaa aaaggcattt 180
atatggatac actgtatgta tctgcactgt ttcaggatcc tctattatga tacctgggta 240
aagggtgact tcctttctat cataaaacag cctagacagc actaagaagg tggttatggt 300
cttttctgtt gttgtgagcg cccagatgag attactttgc caaagactct tttcatttct 360
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ttttcctttc agaaatgacc atggttgaca cagagatgcc attctggccc accaactttg 480
ggatcagctc cgtggatctc tccgtaatgg aagaccactc ccactccttt gatatcaagc 540
ccttcactac tgttgacttc tccagcattt ctactccaca ttacgaagac attccattca 600
caagaacaga tccagtgggt gcagattaca agtatgacct gaaacttcaa gaggacaaa 660
gtatgatgtt tgttttcact tttcagacta ctagg 695

```

&lt;210&gt; 36

&lt;211&gt; 313

&lt;212&gt; DNA

&lt;213&gt; Intron 1, exon 2, and intron 2

&lt;400&gt; 36

```

ctgttttcat gggataatta tcctctcaca tgtctccata cacaggtgca atcaaagtgg 60
agcctgcac tccaccttat tattctgaga agactcagct ctacaataag cctcatgaag 120
agccttccaa ctccctcatg gcaattgaat gtctgtcttg tggagataaa gcttctggat 180
ttcactatgg agttcatgct tgtgaaggat gcaaggtaat taaaaaaaaa gtcttcaaag 240
aaattgttga aactttatta tttcatttca gcagaacccc ttttttaggt gatacaatat 300
atgaattttt ttt 313

```

<210> 37  
 <211> 473  
 <212> DNA  
 <213> Intron 2, exon 3, and intron 3  
 <400> 37

```

gatacctttc gctgtaggtt cgtgcttcca tgtgtcataa agacttaaaa tttgcttctt 60
ttttatccct ttgcagggtt tcttccggag aacaatcaga ttgaagctta tctatgacag 120
atgtgatctt aactgtcggg tccacaaaaa aagtagaaat aaatgtcagt actgtcgggtt 180
tcagaaatgc cttgcagtgg ggatgtctca taatggtaag taaacagtca tcaccatata 240
ctttattatt ctcatatag ctgccagacc agtggacact aaagccattg ccaaaaatgt 300
gtacagtttt tccaccaaat gccagaattt agaattattgc atggcgataa aacattttctc 360
ttttaggtca gtgtttttaa agttttatta tagaaccttt ctctctgtgg ttgggcatct 420
gccatgagga gaaaagagac ttgaaaaatc tgggggatta tgggaaaaac ctt 473

```

<210> 38  
 <211> 706  
 <212> DNA  
 <213> Intron 3, exon 4, and intron 4

<400> 38

```

acaactttga attctgcaca gtttcgtatt ttaattcgtg aaacgtgttg atccttctaa 60
gtgcctgacc ttaggtcaag tgctggggat acaaagaagg tgacctttga attgggtctt 120
gagggatgag taggagttgg ttctcaatta ttacacgttt aagtcgacat acttccctcc 180
ctttgctaaa ctccaattct ttcaatttct cagcaggagt atgcattaac ttttaaaaat 240
gaaagttaac ggtttaattt ttactgatgg tctgtgctac ttttgtgaaa taaaaacatg 300
agcaaagtgg tagacagaaa ccaggactca agagcagtgg aggaggaggg cttctactgt 360
gtgggaacga gggctgggag agcacagtgt gtgttcagag cagtagtaat ccaatgattc 420
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ggagaagctg ttggcggaga tctccagtga tatcgaccag ctgaatccag agtccgctga 540
cctccgtgcc ctggcaaaac atttgtatga ctcatacata aagtccttcc cgctgaccaa 600
agcaaaggcg agggcgatct tgacaggaaa gacaacagac aaatcagtta gttctcttct 660
gctgtcttca ttgggggagg cggaagttg ttttgggatt tttgtt 706

```

<210> 39  
 <211> 732  
 <212> DNA  
 <213> Intron 4, exon 5, and intron 5

<400> 39

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gggaaagaag accaaaattg gtgaaatatg tttggtccca gaagataatt aagatgaata 60
aaagaacttg agagtatttt ctcatatta agcatcttca gctttaaaga ttttagttag 120
caaagcaagt ttacataaac agttttctga acctgggatg gcatttactg tgagttagaa 180
atctccaagt catcccacgt tttccctgtt ttatttgcag ccattcgtta tctatgacat 240
gaattcctta atgatgggag aagataaaat caagttcaaa cacatcacc cctgcagga 300
gcagagcaaa gaggtggcca tccgcattct tcagggtctc cagtttctgt ccgtggaggc 360
tgtgcaggag atcacagagt atgccaaaag cattctgtgt tttgtaaatc ttgacttgaa 420
cgaccaagta actctctca aatatggagt ccacgagatc atttacacaa tgctggcctc 480
cttgatgaat aaagatgggg ttctcatatc cgagggccaa ggcttcatga caagggagtt 540
tctaaagac ctgcgaaagc cttttgttga ctttatggag cccaagtttg agtttgcgtg 600
gaagttcaat gcaactggaat tagatgacag cgacttggca atatttattg ctgtcattat 660
tctcagtggg ggtaagattt gtcttttgat cttctatgaa agaggggtggg atgatggtgg 720
ggtggccaaa ag 732

```

<210> 40  
 <211> 592  
 <212> DNA  
 <213> Intron 5, exon 6, and 3' UTR

<220>

<223> "n" stands for a, g, c or t.

<400> 40

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tccccaccta tttaagatac aaagcaaaac aaaccaaaaa tacagatgag ttgcttggtta 60
gagntgcnta ggcttccaag gcggggccca gaggattttt tgactgaacc ccctgttggtg 120
ttttccatat gtgcttcccc agaccgcccc ggtttgctga atgtgaagcc cattgaagac 180
attcaagaca acctgctaca agccctggag ctccagctga agctgaacca ccctgagtcc 240
tcacagctgt ttgccaagct gctccagaaa atgacagacc tcagacagat tgtcacggaa 300
cacgtgcagc tactgcaggt gatcaagaag acggagacag acatgagtct tcacccgctc 360
ctgcaggaga tctacaagga cttgtactag cagagagtcc tgagccactg ccaacatttc 420
ccttcttcca gttgcactat tctgagggaa aatctgacca taagaaattt actgtgaaaa 480
agcgttttta aaagaaaagg gtttagaata tgatctattt tatgcatatt gtttataaag 540
acacatttac aatttacttt taatattaaa aattaccata ttatgaaatt gc 592
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<210> 41  
 <211> 13  
 <212> DNA  
 <213> PPAR $\gamma$ 3-E-box

<400> 41

attcatgtga cat

13

<210> 42  
 <211> 13  
 <212> DNA  
 <213> PPAR $\gamma$ 3-E-box

<400> 42

attcatgcat cat

13

<210> 43  
 <211> 13  
 <212> DNA  
 <213> A1 (97) Donor

<400> 43

cgcaggtcag agt

13

<210> 44  
<211> 13  
<212> DNA  
<213> A1 (97) Acceptor  
  
<400> 44  
ttgttaagat ttg 13

<210> 45  
<211> 13  
<212> DNA  
<213> A2 (74) Donor  
  
<400> 45  
taacggtaag taa 13

<210> 46  
<211> 13  
<212> DNA  
<213> A2 (74) Acceptor  
  
<400> 46  
cctttcagaa atg 13

<210> 47  
<211> 12  
<212> DNA  
<213> B (211) Donor  
  
<400> 47  
caaggtaaag tt 12

<210> 48  
<211> 13  
<212> DNA  
<213> B (211) Acceptor  
  
<400> 48  
cctttcagaa atg 13

<210> 49  
<211> 12  
<212> DNA  
<213> 1 (213) Donor

<400> 49

caaagtatga tg

12

<210> 50  
<211> 13  
<212> DNA  
<213> 1 (231) Acceptor

<400> 50

atacacaggt gca

13

<210> 51  
<211> 12  
<212> DNA  
<213> 2 (170) Donor

<400> 51

caaggtaatt aa

12

<210> 52  
<211> 12  
<212> DNA  
<213> 2 (170) Acceptor

<400> 52

ctttgcaggg tt

12

<210> 53  
<211> 12  
<212> DNA  
<213> 3 (139) Donor

<400> 53

aatggtaagt aa

12

<210> 54  
<211> 13  
<212> DNA  
<213> 3 (139) Acceptor

<400> 54

ctctatagcc atc

13

<210> 55

<211> 12

<212> DNA

<213> 4 (203) Donor

<400> 55

atcagttagt tc

12

<210> 56

<211> 12

<212> DNA

<213> 4 (203) Acceptor

<400> 56

atttgcagcc at

12

<210> 57

<211> 12

<212> DNA

<213> 5 (451) Donor

<400> 57

ggaggtaaga tt

12

<210> 58

<211> 13

<212> DNA

<213> 5 (451) Acceptor

<400> 58

ttccccagac cgc

13

<210> 59

<211> 12

<212> DNA

<213> 6 (248) Donor

&lt;400&gt; 59

tactagcaga ga

12

&lt;210&gt; 60

&lt;211&gt; 44

&lt;212&gt; DNA

&lt;213&gt; Oligonucleotide

&lt;400&gt; 60

ctaatacgac tcactatagg gctcgagcgg ccgcccgggc aggt

44